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## ABSTRACT

Although academia has been concerned with the need to expand the use of critical thinking skills in the secondary and collegiate curricula, it has paid little attention to the application of critical thinking skills in adult business education. Challenges for an instructor teaching a class of business executives as opposed to a class of undergraduates include: (1) the varied educational background of the executives; (2) their business experiences; (3) their desire for information they can use in practice rather than theory; (4) their active work lives; and (5) their results-driven rather than process-oriented approach. Critical thinking skills are important if business people are to participate to a greater extent in business decisions. The three major components of critical thinking are argument skills, cognitive processes, and intellectual development. Argument skills are needed for recognizing and coping with errors such as "provincialism" and "the false dilemma." Cognitive processes are often taught by using exercises such as "Lost at Sea" or "Desert Survival," where students have the opportunity to use both creative and critical thinking skills. In addition, case studies may be used to illustrate issues of motivation, define situations, and discuss solutions. Although there is little an instructor can do to drastically change the intellectual development level of a business person in a brief seminar, it is possible to help him or her to see the potential value of a next developmental level. An instructor can apply the principles of William Perry's four levels of intellectual development to teaching business people. (PRA)

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# Critical Thinking and Teaching Business People

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## INTRODUCTION

One concern in academia today is the need to expand the use of critical thinking skills in the secondary and collegiate curricula. Less attention has focused on the application of critical thinking skills in adult business education, and in particular in the executive development and training programs.

This paper will review the characteristics of critical thinking, suggest the extend some of the current management materials use this method, and suggest some ways to teach business people using these skills.

First, let us look at the business person in the classroom. There are some interesting challenges when one is teaching a class of business executives compared to a class of undergraduates:

1. The educational background of any 'executive' class might be quite varied. The range might be from high school graduates to those who have MBA degrees or doctorates in a natural or social science. The high school graduates are often persons who have worked their way up the organizational ladder over several decades. The ph.d.'s may be members or directors of the research and development divisions or personnel departments. Just as undergraduates may come from different sized high schools, executives may represent drastically different sized organizations that have different experiences

and face different types of problems.

2. All the participants have some concrete experiences in the business world that they may apply some seminar material to, in contrast to undergraduates.
3. They wish to leave the seminar with some information or ideas that they can apply directly to their specific work situation. A common phrase is "just give us the nuts and bolts' about the subject." Many are accustomed to receiving reports preceded by an 'executive summary'. Though an instructor may introduce abstract theory, the material needs to be presented with concrete business examples that are familiar to their work setting experiences.
4. They often have very active work lives, so that sitting quietly for one to three hours or all day, is not something they are used to doing. They are easily engaged in discussion because they are used to expressing and defending their views and ideas in their leadership positions. Sometimes an instructor has more difficulty limited or directing participant discussion, than initiating it.
5. The end result of a manager's decision making is most important, with less emphasis on the creativeness of the means the end.

## CRITICAL THINKING

Critical thinking is defined by Kurfiss (1988, p.2) as "an investigation whose purpose is to explore a ... situation (or) ... question to arrive at a hypothesis or conclusion about it that integrates all available information, and that can therefore be convincingly justified."

D'Angelo defines critical thinking as " . . . the formulation of possible solutions to a problem or explanation, . . . (and) the testing and evaluations of these solutions or explanations." (Bonello 1991, p.7)

These are the very skills that business people are expected to use in their work environment. People, in part, who successfully demonstrate these skills may be considered "top management material," "natural leaders," or "fast trackers." With the concern today about "empowering the subordinates" to have a greater participation in business decisions, it is necessary to focus on teaching these skills at all levels of the organization.

There are three major components of critical thinking: argument skills, cognitive processes, and intellectual development (Kurfiss 1988).

## Argument Skills

Argumentation is the method by which one justifies assumptions and beliefs. An argument is a sequence of reasoning, rather than verbal disagreement or a conflict of ideas (Kurfiss 1988, p. 13). One aim of critical thinking is to develop skills in the analysis of arguments, detection of reasoning errors and the development of persuasive arguments (Kurfiss 1988, p 13).

Most business executives have experience in decision-making that requires the construction and/or evaluation of logical arguments. These problem-solving situations focus directly or indirectly on contributions to organizational goals. One goal of an executive seminar is to help the participants identify the important information needed to deal with a problem, and to verify important information that will be a significant part of one's argument for a proposed solution.

Common errors in reasoning are "provincialism" (accepting or rejecting arguments based solely on one's own experience), "ad hominem" (criticizing an idea based on one's view of the speaker, rather than the presented argument), and "the false dilemma" (mistakenly reducing the range of possible solutions) (Kurfiss 1988, pp. 15-16). Argumentative skills are necessary to recognize and coping with errors as mentioned above.

## Cognitive Skills

The next important component of critical thinking is the cognitive process. This focus is on the reasoning process. "The 'cognitive revolution' in psychology views perception, learning, understanding, and problem solving as purposeful behavior whose function is to give meaning to experience by imposing order upon it" (Kurfiss 1988, p. 25). "Thus, in critical thinking, the goal is not to find and execute a solution but to construct a plausible representation of a situation or issue that could be presented in a convincing argument" (Kurfiss 188, p. 28).

Business writers have developed annual volumes of material for the business seminar. A number of these exercises deal with decision-making skills. One very popular exercise is "Lost at Sea" (with variations such as "NASA Game," "Wilderness Survival," and "Desert Survival"). The primary objective of this material is to show the value of consensus decision making. The participants are in groups having to decide the importance of fifteen items for their survival in a life raft in the ocean. They have opportunity to use both creative thinking and critical thinking skills, as they assess the survival capabilities of the fifteen common-place items. They also must employ argumentation skills in the decision-making process, though sometimes people draw on "reputational" or "expertise" status rather than convincing deductive arguments. I once observed a person citing his "lengthy experience as an outdoorsman

and hunter" as his sole argument to have the group accept his group his ranking of an item.

Other teaching materials provides executives with a personal reflection about themselves. Leadership inventories, perception profiles, motivation styles typologies are used widely in the United States. Though personal reflection may offer important insights in these areas, the addition of an exercise that will help the participant use these insights in a meaningful way would enhance the learning experience. The case study approach would be very useful here. Whether the instructor presents a hypothetical problem, or generates real case situations from the participants, the participants could work through many if not all of the critical thinking process.

For example, using a motivation standard instrument, after an opportunity for the participants to discuss the meaning of their own scores, an instructor could:

1. Present the participants with a case study they could relate to issues of motivation.
2. Have them define what the situation or problem is. If there are more than one definition, have them decide what information they would need to distinguish which one is most appropriate, and what



might be possible errors in their assessment.

3. Based on the principles of motivation they have just been introduced to, have them develop several possible solutions, weighing the strengths and weaknesses of each. They also should identify the assumptions implicit in each proposed solution.
4. Discuss what kinds of information they would need to choose a possible solution.
5. Discuss what are some personal, organizational, ethical, and/or moral implications of the selected solution.

There are a variety of ways one might organize such an activity. Bonello (1991) uses critical thinking skills to examine economic issues in a principle of economics course. What is important is the focus on the process of critically thought decisions.

There are other things one needs to do in preparing to teach business people. Learn about the unique aspects of the participants' business. It is important to establish fairly soon in the presentation that you understand the uniqueness and special characteristics of their work. Sometimes you may emphasize a characteristic that they believe makes their work unique, though it

may be quite common in other industries. When teaching executives and staff from volunteer organizations such as chamber of commerce and professional and trade associations, it is important to recognize that they have historically felt that they are extremely unique and different, though in fact they have many characteristics in common. One way to obtain this type of information is to spend 15 to 25 minutes speaking to a member of this business a few weeks before the presentation.

### Stages of Intellectual Development

The third component of critical thinking is the levels of a person's intellectual development. Perry (1981) indicates that people move through different intellectual stages as they develop " . . . meaningful ways of construing the world of knowledge, value, and education" (Perry 1981, p. 78). Perry identified stages and regressive alternatives from which people view their world (Kurfiss 1988, p. 52). Belenky et al. (1986) offer an alternative four stage model for college women. They point out that Perry's original sample was about 100 Harvard undergraduate males (a less than a random sample of the nation's student body). This later work offers an explanation why samples of women consistently fall into lower intellectual developmental stages than samples of men when measured with Perry's scheme.

Frankly, there is very little one can do to drastically change the intellectual development level of a business person in a brief seminar, but one can help them see the potential value of a next developmental level. It is important to recognize that each will approach the seminar materials in different ways.

I will not to give a detailed description of each of the levels and alternatives, but will indicate how a person at each of the four primary levels would react in an executive seminar. These stages in part, are influenced by peoples assumptions about knowledge (e.g. characteristics of truth, knowledge, authority, and the process of inquiry) Discrepancies between peoples' assumptions concerning knowledge is probably a major source of frustration when the critical thinking process is employed (Kurfiss 1988, p. 51).

Level 1 - This represents the dualistic thinker, who believes there are clear factual truths in the world, and that alternative solutions must be wrong, 'if my solution is right.' This person is unable to deal with multiple solutions or alternatives. They have a high dependency on authority. If an 'expert' has given them the answer, there is no further need for discussion. The 'level 1' business person, will be very influenced by 'expert answers' but if the ideas should conflict with already held values and beliefs then the 'subject is closed,' and new ideas are rejected. The prospect of legitimate

alternative solutions is extremely confusing to them. Research suggest that there are very few 'Level 1' undergraduate students, I would assume that a similar proportion of people exist in the business world.

Level 2 - This person accepts that there can be multi-possible solutions. He/she can accept the notions of the unknown, doubts and uncertainties in life, but when there is no accepted fact, than one idea is as good as another. These people have not yet determined how to make judgements in these situations, turn away from authority, and feel that " . . . intuition, feeling or 'common sense' (are solutions to resolving) 'legitimate difference" (Kurfiss 1988, p. 54). This business person is very difficult teach.

Level 3 - At this level of people begin to recognize that there are alternatives and opinions of different qualities, and that " . . . 'good' opinions are supported with reasons" (Kurfiss 1988, p. 54). These people begin to develop a tolerance and understanding for divergent viewpoints.

Level 4 - These people believe that one must take a position and make a decision, though they recognize the possibility that they could be wrong. Belenky et al. call this "constructed knowledge," where the person "integrates knowledge learned from others with the 'inner truth' of experience and personal reflection" (Kurfiss 1988, p. 55).

How would an instructor apply these principles to teaching business people?

1. The instructor needs to " . . . provide some structure and clarification of divergent views (for the) level 1 (manager)," and communicate the point that alternative viewpoints can be legitimate (Kurfiss 1988, p. 65-67).
2. Give participants an opportunity to express their opinions and then to critique their own opinions. This will help the level 2 people, who need to understand that opinions must have some justification, and can be challenged on rational grounds (Kurfiss 1988, p. 65).
3. Level 3 managers need encouragement to affirm a position facing uncertainty, for this ". . . is a challenge that requires courage and integrity as well as rationality" (Kurfiss. 1988, p. 65).
4. Provide encouragement and feedback to reinforce critical thinking behavior, and to recognize that participants will have difficulty initially recognizing this behavior.

### CONCLUSION

Attempting to use the critical thinking mode in a classroom is a challenging strategy. I was introduced to formal critical thinking theory one and one-half years ago in a summer faculty workshop. One of the most difficult and rewarding tasks I have been doing is to review and assess my classroom activities, exams, and

assignments in terms of the critical thinking. An interesting exercise was to examine a class I consider my most successful, and to identify where critical thinking skills were being utilized, how successful they were, and where they might be introduced to strengthen a course topic. I sincerely believe that critical thinking skills are also important skills for the teaching of business people, and their use will enhance executive business education.

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